MPEG Streamclip 1.9
Universal Binary
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HIGH-QUALITY CONVERTER FOR MPEG-1/MPEG-2 FILES AND TRANSPORT STREAMS WITH PLAYER AND EDITING SUPPORT, SUITABLE FOR MPEG-2 CAMCORDERS, DVD AND DVHS RECORDERS, DVB SET-TOP BOXES; COMPATIBLE WITH APPLE FINAL CUT PRO AND DVD STUDIO PRO.

NOW CAN MAKE, EXPORT AND EDIT DIVX 6 MOVIES; IMPROVED iPOD EXPORT; VIDEO FILE DOWNLOAD AND STREAMED/REMOTE PLAYBACK AND EDITING. COMPATIBLE WITH FLV (YOUTUBE, GOOGLE, YAHOO) VIDEOS.

To play and export MPEG-2 files, you have to install Apple's MPEG-2 Playback Component. If you have Final Cut Pro 4/5, Final Cut Studio, or DVD Studio Pro, the MPEG-2 Playback Component is already installed. Otherwise, you can purchase it online from Apple. QuickTime Pro is not required.

For DivX editing/export you have to install DivX 6 and later, or XviD. For FLV playback you have to install Perian. For WMV playback it is necessary to install Flip4Mac WMV Player.

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This software has been written by Squared 5 in Italy. All the code used in this application is absolutely original, including the AC3 decoder, the AVI importer, and the powerful tools for the DreamBox and the Topfield 5000. No third party code has been used in this application, even when suitable open source code was freely available. And the design of this software is also original; no third party applications have been reverse engineered to make MPEG Streamclip work. This application works just because it's well written, and works well because it does not make use of recycled source code.

NEW IN VERSION 1.9

This version includes all the improvements in previous betas, and adds concurrent

batch processing. It fixes compatibility issues with AVI movies, DivX Community Codec, Google Video, Elgato Turbo.264, Mac OS X 10.5 Leopard and Mac OS X 10.3. It also adds better iPhone support. It contains a workaround for a bug found in QuickTime 7.2/7.1.6 which may cause MPEG-2 or VOB files larger than 4GB to freeze between 2GB and 4GB. It also contains an important new feature and many improvements. Moreover, it adds compatibility with Elgato Turbo.264.

BATCH LIST
You can now start up to 4 concurrent tasks in the batch list: this may be useful for multicore Macs. When more than one task is running, by clicking on a single task you can watch its progress.
You can set the batch list to start processing the tasks as soon as they are added (automatic start).
When you click "Add Files" you can choose to fix timecode and don't skip any frame, or reuse the last folder and settings.

COMPATIBILITY
Fixed a bug which caused submenus of the File menu to be improperly grayed out in Mac OS X 10.3.
Fixed a compatibility issue with Google Video.
Fixed a compatibility issue with the Avid DV codec when used in PAL mode.
Fixed an issue with Perian and progressive download of FLV files.
Added sound playback/conversion for some FLV files with uncompressed sound.

NEW IN BETA VERSION 1.9b3
OPEN FILES
Fixed a problem with some AVI movies that failed to open properly or played just a little part.

COMPATIBILITY
Fixed an important compatibility issue with Mac OS X 10.5 Leopard.
Fixed an issue which prevented opening and downloading videos from Google Video.
Added compatibility with DivX Community Codec (DivX Pro Codec turns into Community Codec when the trial period expires); in previous versions that feature-limited codec caused an immediate crash of MPEG Streamclip. Now you can use it to encode DivX video and MP3 sound, although there are several limitations and you can't adjust video and audio quality. Also note that MPEG Streamclip will freeze for a minute when you start encoding and at some points while encoding. If you don't want these limitations, then you can buy DivX Pro.

PREFERENCES
The preference option "Resample audio to 48 kHz" now works with Convert to MPEG with MP2 Audio if the source is MP2 audio with a sample rate less than 48 kHz. Re-encoding of MP2 is performed with the bitrate specified with MP2 Encoding Bitrate.

CONVERSIONS
Added two presets for the iPhone, you'll find them with the "iTunes..." button in Export to MPEG-4, and also in Export to Other Formats for some formats.
Encoding of HD movies up to 1600x900 is now possible with Elgato Turbo.264 and Export to Other Formats. MPEG Streamclip works around the limitation of Turbo.264 (800x600) by automatically using rectangular pixels. In the future, a manual setting for rectangular pixels may be added to other exporters as well.

NEW IN BETA VERSION 1.9b2
EXPORT TO OTHER FORMATS
A new "Export to Other Formats" command adds a completely new way of exporting files and movies with MPEG Streamclip. Most QuickTime-compatible exporters can be used with MPEG Streamclip now.
Note that only some exporters are recognized by MPEG Streamclip, and their behavior may be significantly different than that shown in QuickTime Pro. Also note that there are still some bugs and issues with some exporters.
Finally, note that the preview window in "Export to Other Formats" shows the pictures BEFORE ENCODING, not after encoding like in other export commands. To check the actual video quality you have to open the destination file. You don't have to export the whole movie to check the quality since in most cases, if you stop an export operation you may still get a valid exported file.
The "Export to Other Formats" command is compatible with Elgato Turbo.264, but also with Flip4Mac WMV Studio and 3ivx Media Exporter. It is even compatible with the free Real Export Plug-in (http://www.realnetworks.com/products/realexport/): to use this plugin on Intel Macs, you have to open MPEG Streamclip with Rosetta.

CONVERSION
Added a cropping option to choose whether you want to crop the source frame, the destination frame, or crop and scale the destination.
Added an option to save a file as DV using the "Save As" command; it works only if the source file format is DV.
Batched "Save As" allows to choose the destination file format.
Added support for AIFF files created with some Windows applications.
Fixed an issue in which the data rate limit was not enabled for 3ivx 5.0.
Fixed a potential problem with very long NTSC movies and frame blending.
Improved export of progressive download movies.
Improved AVI 2.0 export.

PLAYBACK
Added a command to resize the player to 200% in the Window menu.

ENIGMA
Fixed some compatibility issues with newer DreamBox firmware images.

NEW IN BETA VERSION 1.9b1

FILE MENU
New Open DVD command; if the batch list is open it can also batch convert a DVD
Can read and create AVI 2.0 files (they can be larger than 4 GB)
Can open all AIFF and MP3 files (including music CD tracks); can read and multiplex little-endian AIFF files
New Export Audio command with uncompressed, AAC, MP2 and even MP3 (if you have DivX 6.x)
Some "Convert to" and all "Demux" commands have been moved to submenus

DRAG & DROP
Added drag&drop of multiple files to the application icon and window
Added drag&drop of DVDs (and even music CDs) to the application window only

CONVERSIONS
More audio sample rates in the exporters
Added some presets for the Apple TV
Video exporters can export just the audio track if you choose "No Video", or the source has no video tracks
All "Convert to" commands except "Convert to TS REC" and "Convert to TS VID" can convert all audio tracks of the MPEG stream; all "Demux" commands are still limited to only one audio track per pass (but this may change in the future).
The preference option "Fix streams with data breaks" can repair more audio breaks
Fixed a problem which could cause the MPEG-4 export to fail near the end of encoding
Temporary data for multipass encoding are now stored in the destination disk instead of the startup disk (if they are different)
"Save As" now saves all audio tracks even after editing, regardless of preference settings
"Save As" after "Fix Timecode Breaks" now saves the fixed timecode instead of the original timecode
Export of progressive download movies works as expected, even when the movie has not been fully loaded
The frame exporter remembers the name of the last exported picture, and adds a number when used multiple times

OPEN URL
Added support for Yahoo! Video movies: requires both Perian and Flip4Mac WMV Player
Added an option to convert movies while downloading them; currently, with Perian 0.5, FLV files this option will download the whole file before the conversion can begin, but this will change with Perian 1.0.
Renamed the options "Open as streamed file" and "Open as remote file" respectively to "Progressive download" and "Random access".
The option "Random access" can open HTTP and now even FTP streams, without prior download; it is compatible with most strams but FLV and WMV files still require full or progressive download.

MPEG files larger than 4GB can be opened in their full length with "Random access"

PLAYBACK
The Home and End keys (close to the Page Up/Down keys) can be used to skip about 1 minute forward/backward; for some streams these keys may attempt to reach a keyframe for faster access.
With URL-based streams opened with random access, if you click the central Play button of the player, at least 5 seconds of the stream will be preloaded before playback starts; other buttons/keys will preload only 1 second.

EDIT MENU
Added the standard command "Select All" which works exactly like "Cancel Selection" in the player window, but has the usual behavior of selecting all items in other windows like the open files window and the batch list.
Added the "Go to Time" command which allows to move to a specific time (if you enter a time and no "-" characters) or to change the selection (if you enter one or two times and one "-" character); colons are optional. With the same command you can also read or copy/paste the current time or the current selection (by choosing between "Time" or "Selection" if necessary).
Added a "Delete Audio Track" command to remove the current audio track from a stream; it does not change the source file and it can be undone with "Undo" or "Revert All".

BATCH LIST
Added the "Open Anyway" option to the batch list
Batch download/conversion of all movies in a page (e.g. search results) from YouTube, Google Video, Yahoo! Video
Redirection of a single file allows you to change the destination folder as well as the destination filename
In some cases, when you add files to the batch files and some destination files already exist, you may opt for automatic renaming
Less memory used when batch downloading URL-based files

PREFERENCES
Setting to preserve MPEG-1/2 frames or GOPs at In/Out when converting, exporting, trimming, cutting
Setting to resample audio when converting MPEG-1/2 with audio format conversion
Setting to disable conversion of multiple audio tracks in "Convert to" and convert just one audio track, like in previous versions
Separate settings for audio level (volume) of MP2 conversion, one for encoding and the other for decoding. Default is "normal level" and "high level".
Device-specific setting for Topfield, allowing automatic addition of recording date to the file name.

ADJUSTMENTS

Added automatic volume control setting for export: useful for camcorder movies but not recommended for music or high quality audio tracks.

COMPATIBILITY
Added backward compatibility with DivX 6.0
Improved compatibility with DivX 6.5 and later: added quality-based encoding and fixed 1920x1080 encoding
Improved compatibility and usability with Flip4Mac WMV Player
Fixed a compatibility issue with YouTube
Compatible with Perian 1.0 (coming soon): will support progressive download of FLV movies
Added compatibility with .TOD files (JVC)

MPEG STREAMCLIP ON INTEL
MPEG Streamclip Universal Binary contains a native version for Intel and a native version for PowerPC, taking full advantage of the power of Intel Core/Core 2/Xeon and PowerPC G4/G5 processors. There are more than 350 differences between the two native versions; yet they are expected to behave in the same way.

If you have an old version of the MPEG-2 Playback Component (prior to January 2006), please do not use it in the Intel Mac, but download and install the Universal Binary version of the component from Apple.
Also note that the MPEG-2 Component produces different results when you use MPEG Streamclip native on Intel, rather than in PowerPC/Rosetta. The native Intel version of the component seems to provide slightly better quality than the native PowerPC version.

If you have problems with some streams, please try to open MPEG Streamclip with Rosetta to see if the problem is related to a possible bug in the native Intel version of MPEG Streamclip or in the native Intel version of MPEG-2 Playback Component.

MPEG Streamclip works well with Rosetta. There are just two performance issues: 1. there is no hardware scaling support in Rosetta, so video playback is jerky; 2. conversions are usually 2.5 times slower. Note that you have to open MPEG Streamclip in Rosetta every time you want to use a codec that's not available as Universal Binary.

The included Save as AVI.component is Universal Binary too. To use it on an Intel machine, you have to install XviD for Intel. You will find it in http://n.ethz.ch/student/naegelic/. Make sure to download the disk image "XviD_Avi_Import_Preview4_intel", and install the components "XviD_Codec-r58" and "AviImporter-r7".

OVERVIEW OF MPEG STREAMCLIP
MPEG Streamclip is a converter, an exporter, a player, an editor, a downloader.

It can open many file formats: muxed files MPEG, MPG, VOB, PS, M2P, MOD, VRO,

DAT, DCM, VDR, PVR; transport streams TS, M2T, MTS, MMV, REC, VID, AUD, AVR, TP, TP0, TRP, TOD; demuxed files M2V, M1V, MPV, AIFF, AIF, M1A, MP2, MPA, AC3; QuickTime-compatible files MOV, DV, AVI, MP4, DIVX, WMV, FLV; pictures TIFF, JPEG.

MPEG Streamclip supports MPEG-1 video, MPEG layer 1/2 audio, AC3/A52 audio and PCM audio. MPEG-2 video is supported in conversions, but for playback and export you have to buy the MPEG-2 Playback Component ($19.99) from Apple.
To open DivX files, you have to install one of the free DivX-compatible codecs (DivX 5 or 6, 3ivx, XviD).
To open WMV files, you can install the free Flip4Mac WMV Player from http://www.flip4mac.com/ . Export to WMV is supported if you buy Flip4Mac WMV Studio.
To open FLV files you have to install Perian, a free codec pack, from http://www.perian.org/. But note that currently, Perian does not "obsolete" or replace other codecs so you still have to install 3ivx, DivX, XviD when required.

Converter features:
– from MPEG, MPG, VOB, PS, M2P, MOD, VRO, DAT, DCM, VDR, PVR, TS, M2T, MTS, MMV, REC, VID, AUD, AVR, TP, TP0, TRP, TOD
to MPEG, TS, REC, VID, M2V, AIFF, M1A, AC3
– multiplexing of M2V, M1V, MPV files with AIFF, M1A, MP2, MPA, AC3 files
to MPEG, TS, REC, VID, M2V, AIFF, M1A, AC3
(just open the M2V or M1V file, and the audio file with the same name will be multiplexed on the fly).
– very fast, no loss of video quality, perfect audio/video sync
– compatible with Toast 6/7/8, DVD Studio Pro 2/3/4, Final Cut Pro/Express, and Sizzle.
– special Headed format to import unsupported frame sizes in Toast 6/7/8 or DVD Studio Pro.
– special Unscaled demuxed files for Final Cut Pro and Final Cut Express
– can automatically join multiple VOB or TS files
– manual command to scan the stream and fix timecode breaks
– batch conversion

Exporter features:
– from MOV, DV, AVI, DIVX, MP4, WMV, FLV, MPEG, MPG, VOB, PS, M2P, MOD, VRO, DAT, DCM, VDR, PVR, TS, M2T, MTS, MMV, REC, VID, AUD, AVR, TP, TP0, TRP, M2V
to MOV, DV, AVI, DIVX, MP4
– supports any QuickTime-compatible video codec, and many audio formats
– uses the new features of QuickTime 7, but is still compatible with QuickTime 6
– very high quality encoding, all in YUV color space, either unscaled or with 2D-FIR scaling (better than bicubic)
– motion-adaptive deinterlacing and chroma reinterlacing, with perfect audio/video sync\
– internal high-quality audio resampler
– batch export
– concurrent tasks in batch for multiprocessing

Player features:
– playback of QuickTime-compatible files
– playback of muxed/demuxed MPEG/VOB files and transport streams with MPEG, AC3, PCM/AIFF audio
– playback of MPEG files larger than 4GB, or segmented in many files
– support for multiple audio tracks in transport streams and MPEG/VOB files
– full screen playback, zoom with arrow keys

Editor features:
– cut/copy/paste of MPEG files and transport streams, at keyframe (GOP) level
– frame accurate cut/copy/paste of QuickTime files
– trimming function, with unique "revert trimming" feature
– access to keyframes with arrow keys
– edit list

Downloader features:
– playback and download of AVI, DIVX, MOV, MP4, WMV, FLV files directly over the Internet
– in some cases, playback and download of video files by entering the address of the web page in which the file is embedded
– editing before saving the movie to disk
– conversion while downloading
– batch download

And many more features are available!

IF YOUR FILE DOESN'T GET CONVERTED...
Please send a mail to Squared 5. The best way to help Squared 5 in improving MPEG Streamclip is, of course, making small samples of your files available (1 MB is usually enough). The preferred way is uploading samples to a web site, or using file sharing on your iDisk, if you have one. The MPEG file must not contain any personal information.

SETTING PREFERENCES
You can open the preferences window of MPEG Streamclip by choosing "Preferences..." from the MPEG Streamclip menu. Preferences are stored on disk and you won't lose them when you quit MPEG Streamclip (presets are also stored on disk, but other settings are not). You can set the following options:

<u>Fix streams with data breaks</u>
When checked, this option enables a special stream processing, in order to repair audio and video and recover audio/video synchronization in streams that present data breaks. It works when you use Export, Convert, Demux. This option makes the conversion a little bit slower, however you would better enable it when you are

converting transport streams from TV broadcastings or digital video tapes.

Fast decoding of data breaks
When a transport stream has many data breaks, exporting it may take forever. With this option you can speed up decoding of data breaks and make export faster. This option has effect only on transport streams, not with other MPEG files: if you have a muxed MPEG file with many data breaks and you want to export it quickly, you can convert it in a transport stream using "Convert to TS...", then open the TS file, enable this option and export it.

Preserve GOPs at In/Out
Editing of MPEG-1 or MPEG-2 files is not frame accurate: MPEG Streamclip cuts at GOP or keyframe level (see the section "Editing the stream"). With this option you can choose whether MPEG Streamclip should discard or preserve the GOPs (Group Of Pictures between two keyframes) when the In or Out points are not set to a keyframe and you make a cut, trim, or convert/export from In to Out.
By default, if the In and Out points are not keyframes, GOPs that are located at In and Out will be discarded: the Cut command cuts more than selection and the Trim command trims less than selection. When this option is enabled, these GOPs at In/Out are preserved, so the Cut command cuts less than selection and the Trim command trims more than selection.

Convert only one audio track
Since version 1.9, the "Convert to" commands can convert all the audio tracks. Enable this option if you want to convert only the audio track chosen with the "Audio PID" pop-up menu.
This option has no effect on other conversion commands. The "Demux to" and "Export" commands always process only one audio track, while the "Save As" command always saves all audio tracks regardless of this settings. It also has no effect on the "Convert to TS REC" and "Convert to TS VID": these commands cannot convert multiple audio tracks.

Resample audio at 48 kHz
When you enable this option and you use a "Convert to" or "Demux" command that performs an audio conversion (for instance from MP2 to AIFF), the sample rate will be changed to 48 kHz, if not already at 48 kHz.
This option has no effect if the conversion command does not perform any audio conversion (for instance from MP2 to MP2/M1A); but when enabled, as a special case, the command "Convert to MPEG with MP2 Audio..." changes the sample rate to 48 kHz even if the source audio format is MP2.

Don't open preview when exporting
Does not open the preview window when exporting to QuickTime, DV, AVI. This speeds up conversion by about 1%. Anyway, you can open and close the preview window at any time, while and after exporting, with "Show Exporter Preview" from the Window

menu and "Close" from the File menu.

Preview all frames
When this option is enabled, and you click "Preview", the exporter preview shows all encoded frames; when disabled, only some sample frames (typically, keyframes) are shown in the preview window. But when you click "Make" to export a file, only sample frames are shown regardless of this setting.

Auto-resize player and preview
If enabled, the player and the preview window will be respectively resized to full frame when a new file is opened and when a movie is being exported. But note that if the player window has been maximized to full screen, it will not be resized.

DV Playback Quality
This option lets you set playback quality for DV movies and streams in when played in QuickTime player. This setting does not change DV encoding quality, but just playback quality.

MP2 Encoding Bitrate
Sets the bitrate used for MP2 (M1A) encoding, it affects the commands "Convert to MPEG with MP2 Audio", "Demux to M2V and M1A", "Demux to M1A", "Demux to Headed M2V and M1A". It has no effect on the audio bitrate setting of the export window.

MP2 Encoding Level
Sets the audio level for MP2 (M1A) encoding; it affects the commands "Convert to MPEG with MP2 Audio", "Demux to M2V and M1A", "Demux to M1A", "Demux to Headed M2V and M1A", but unlike the previous preference it also affects the "Export" commands when they encode MPEG Layer 2 audio. For more details see the section "Audio modes and MPEG audio".

MP2 Decoding Level
Sets the default audio level for MP2 (M1A) decoding in the "Audio Mode" pop-up menu. It also lets you set the MP2 decoding audio level for batch processing, when you add the files through "Add Files" and the "Audio Mode" selector is not available. For more details see the section "Audio modes and MPEG audio".

Play streams with "user data"
Some broadcasted transport streams (especially from CanalSatellite France) have junk "user data" that may prevent playback. The player shows a completely white picture (Intel) or becomes "transparent" and the 5 blue dots appear behind it (PowerPC/ Rosetta). But if you enable this option and reopen the stream, user data will be overwritten and you will be able to play and convert it without problems. This setting has effect only on transport streams; please enable it only if you have this problem.

Clear "composite display flag"
A very advanced setting, it makes a small change in the stream to fix a possible compatibility issue with some DVD players that use the Zoran chipset. Do not enable this option, unless you have one of these DVD players and you are experiencing small green squares during playback.

Skip Buttons
You can change the skip interval of the two skip buttons ▶▶ and ◀◀. Default is 10 seconds.

AVI Settings
These advanced settings change the way AVI files are saved and exported. "Slow rendering" will improve the rendering quality of cuts when saving an edited AVI file back to AVI using "Save As..." (every cut must be encoded again when saving as AVI); but it has no effect on "Export to AVI...".
On the other hand, "VBR Audio" affects both "Save As..." and "Export to AVI..."; using VBR (Variable Bit Rate) audio can improve A/V sync of some files but it may be incompatible with some players.

Device-Specific Settings
These setting are reserved for the owners of DreamBox and Topfield 5000. Please do not change these settings unless you have one of these set-top boxes.

OPENING STREAM FILES
Choose "Open Files" from the File menu, select one or more source files and click Open.
If you want to open audio files you have to choose "Audio Files" in the pop-up menu below.
You can select files with the following extensions: (Video Files) .ts, .ps, .vob, .vro, .dat, .vdr, .pvr, .rec, .mpeg, .mpg, .m2p, .m2t, .mts, .m2v, .m1v, .mpv, .mmv, .mod, .vid, .avr, .dcm, .tp, .tp0, .trp, .tod, .mov, .dv, .avi, .mp4, .m4v, .divx, .wmv, .flv, .jpeg, .jpg, .tiff, .tif; (Audio Files) .aiff, .aif, .m1a, .m2a, .mp2, .mpa, .ac3, .aud. Also supported are MPEG, AIFF, MOV files with no extension.
If your MPEG file comes with an unsupported extension, you can choose "All Files" in the pop-up menu and try to open it. With "All Files" you can also go into an iDVD project and open its MPEG files.
For .m2v, .m1v, .mpv video files, if a valid audio file with the same name and the .aiff, .aif, .m1a, .mp2, mpa, .ac3 extension exists, it will be opened together with the video file. If more than one audio file with a valid extension exists, the first will be opened using the above search order (that is, .aiff first, .ac3 last). Opening a demuxed video or audio file may take time; a progress indicator appears and you can stop the process with Command-. or Esc.

The extension may be uppercase or lowercase; mixed case extensions are supported

only on Mac OS X 10.3 and later.
AIFF audio files must be 16-bit uncompressed and have a supported sample rate.

Alternatively, drag & drop any supported file over the application icon or into the player window. Since version 1.9 you can drag multiple files and they will be opened together in alphabetical/numerical order. You can drag & drop audio and other files with unsupported extension if you hold down Command and Option before dropping the file.

If you select more than one file, please make sure that all selected files are part of a single MPEG stream (perhaps larger than 1GB), and they are shown in the correct order in the open file panel (that is, first file before last file). If they do not, please change the order by clicking the triangle in the Name field. Note that the order in which you make the selection is not relevant; only the display order applies.

If you select (or drag) just one file and it is clear that the file is part of a longer MPEG stream, this application gives you the option to open all the files of the stream together. Examples are:
VTS_01_1.VOB + VTS_01_2.VOB (DVD);
Recording.ts + Recording.ts.001 (DreamBox);
Movie_0501220105~0.vid + Movie_0501220105~1.vid (Humax);
000&&Channel.tp0 + 000&&Channel.tp1 (Homecast).

Please contact Squared 5 if your device splits MPEG files using a different pattern.

OPENING A DVD
With the "Open DVD" command of the File menu, you can open a DVD by choosing the whole disk, or its VIDEO_TS folder; you can also select any VIDEO_TS folder located anywhere.
You can even open a DVD by dragging it over the player window.
If the DVD contains multiple movies (titles) MPEG Streamclip will ask you to choose which movie you'd like to open.

To batch convert a DVD, open the batch list before using the Open DVD command: if the batch list is open, MPEG Streamclip will ask if you want to batch convert the DVD or just open it in the player.

OPENING A STREAM OVER THE INTERNET
Choose "Open URL" from the File menu, enter the URL address of the stream, click "Open" and, if recognized, the stream will be opened in the player.

In some cases, you can also enter the URL address of a web page, and MPEG Streamclip will try to open the video stream that's embedded in that page. At the time of this writing, and if you installed Perian, this feature works with YouTube videos and Google videos, but there is no guarantee it will work in the future.

There are some options in the "Open URL" window. The first three, "Open", "Convert", "Download", are useful for movie download and will be explained in the next section. The other two, "Progressive download", and "Random access" determine the way in which the stream will be opened. You can use "Progressive download" (the default) or read the following information to find out which mode to use. Note that if you select the wrong mode and it fails, MPEG Streamclip may automatically try the other mode before giving up.

The "Progressive download" mode opens the stream as a sequential file with the progressive download method. The connection is controlled by QuickTime; data are cached on disk. It works with several streaming and downloading protocols, not only HTTP or FTP, but it does not allow you to seek beyond the current downloading point. Moreover, MPEG files opened with "Progressive download" will be converted without sound.

The "Random access" mode opens the stream as a remote random-access file. The connection is controlled by MPEG Streamclip; data are cached in RAM. It works only for HTTP or FTP streams (beginning with "http:" or "ftp:") and it allows you to seek without waiting. Good for AVI and MPEG-2 files; however in this mode the player may hang for several seconds when you play the stream and your connection is too slow.

Some files have to be partially downloaded before they appear in the player. This may take time; a progress indicator appears and you can stop the process with Command-. or Esc (if you press it once, then the player will show the first part of the stream). To play FLV files you have to install Perian.

DOWNLOADING A STREAM

Choose "Open URL" from the File menu, enter the URL address of the stream, select "Download" and the button to the right will change from "Open..." to "Download...". Click "Download…" and, if recognized, the stream will be downloaded to disk. If the batch list is open, the task will be added to the batch list, and you can start downloading the stream later.

In some cases, you can also enter the URL address of a web page, and MPEG Streamclip will try to download the video stream that's embedded in that page. At the time of this writing, this feature works with YouTube videos and Google videos, but there is no guarantee it will work in the future.

You can convert the movie while downloading it if you choose the option "Convert" and then click the button "Convert..." and choose the conversion. This option lets you save disk space and time, although some movies may need to be completely downloaded before the conversion can start.

The "Progressive download" and "Random access" options also apply to download. Please choose the proper option, or use the default "Progressive download". If you are

downloading without conversion, MPEG Streamclip may use "Random access" to save disk space, regardless of your choice.

READING STREAM INFO
You can open an info window for the current stream using "Show Stream Info" from the File menu. All relevant data are reported in this window.
The "Video PID" pop-up menu lists, for MPEG files, the available video tracks and the "Audio PID" lists the available audio tracks; only the selected video and audio track will be converted.
The two times under "Trimming" indicate the portion of the movie shown in the player: they change when you trim the movie. The "In" and "Out" times indicate the portion of the stream to be saved, exported or converted: they represent the current selection.

Scrambled or encrypted streams are not supported. If you open these files, you may get unpredictable results. However, if a stream is just partially scrambled, this application attempts to find a portion of the stream which is not scrambled; if it succeeds, the Readable Size will be shown in the info window.

CHOOSING AUDIO AND VIDEO PIDS
A single MPEG stream can deliver more than one video and one audio track (e.g. more than one language). A single video or audio track (also called elementary stream) is identified by a number called PID (Packet IDentifier) which is unique to that track. Before playing a stream or doing a conversion, you should select the proper audio and video PIDs, using the two pop-up menus, to specify the audio and video track to play or include in the destination file; otherwise, two default PIDs will be chosen for you.

Muxed MPEG files, unlike transport streams, have no PIDs but may still have more audio and video tracks, each identified by a different "start code". For muxed files, the PID menus will show the start code of each available video and audio track.

For FLV (Flash Video) files, the Video PID menu shows three options to select the aspect ratio of the video track: 0 (default aspect), 4:3, 16:9.

AUDIO MODES AND MULTICHANNEL AC3
AC3 audio tracks support up to 6 different channels (L, R, Center, LS, RS, LFE) but MPEG Streamclip can only play/convert two channels at a time. Using the "Audio Mode" pop-up menu you can choose the two channels to be used. If you have no special needs, you can use the default audio mode (Stereo Mix); otherwise, keep on reading for more detailed info.

Stereo Mix
Makes a mix of L, R, Center (the 3 front channels) plus LS and RS (the 2 surround channels), it takes the mixing coefficients from the AC3 stream and produces a stereo sound in conformance to the A52 standard. The LFE channel is not included.
Note that for AC3 2/0 (see below) this and the 3 following modes just pass the L and R

channels unchanged.

Front Mix
It is the same as Stereo Mix, but it excludes LS and RS (the two surround channels) from the mix. Use it when the surround channels have bad sound.
If the surround channels are not present, or were already excluded from the Stereo Mix (due to a zero mixing coefficient from the AC3 stream) then Front Mix produces the same sound as Stereo Mix.

Surround
Makes a Dolby Surround-compatible stereo sound. Using this special stereo sound, a Dolby Pro Logic amplifier with 6 speakers (5+1 subwoofer) may be able to reconstruct and play all the 6 channels of AC3.
Use this mode only if your audio equipment has a Pro Logic decoder and can handle Dolby Surround.

L/R Ch.
Lets you play and extract the L and R channels as a stereo pair. All other channels are excluded. If both L and R channels are missing, the Center channel is used instead.

Center Ch.
Lets you play and extract the Center channel. All other channels are excluded. If the Center channel is missing, a mono mix of L and R is used instead.

LS/RS Ch.
Lets you play and extract the LS and RS (surround) channels as a stereo pair. All other channels are excluded. If LS and RS are missing but exists a S (center surround) channel, this channel is used instead. If LS, RS and S are all missing, the sound will mute.

LFE Ch.
Lets you play and extract the LFE (low frequency effects) channel, used to drive a subwoofer. This channel is optional even in AC3 3/2; if it's missing, the sound will mute.

You can use the last 4 modes to make 4 AIFF files holding all the content of the AC3 track. You can then put these files into A.Pack to make a new AC3 file with the same content; but make sure to disable A.Pack preprocessing option "Apply 90º Phase-Shift".

The number of channels that are present in an AC3 stream can be deduced from the AC3 coding mode (shown using two digits separated by a slash or a plus sign). This is a list of all AC3 coding modes with their channels:
– AC3 1/0: Center (mono)
– AC3 1+1: L, R (dual mono)
– AC3 2/0: L, R (stereo)
– AC3 3/0: L, R, Center (3 front channels)

– AC3 2/1: L, R, S (stereo + 1 surround)
– AC3 3/1: L, R, Center, S (3 front + 1 surround)
– AC3 2/2: L, R, LS, RS (stereo + 2 surround)
– AC3 3/2: L, R, Center, LS, RS (3 front + 2 surround)
Note that the LFE channel may be optionally present in all of these AC3 modes.

AUDIO MODES AND MPEG AUDIO
For MPEG audio tracks (MP1, MP2) two different audio levels are available for playback and conversion to MOV, DV, AVI, MP4 and AIFF: "High Level" and "Low Level". You can choose one of these two levels using the "Audio Mode" pop-up menu. Use "Low Level" if, and only if, the converted movie or AIFF file shows an excess of volume.

The default level that appears in "Audio Mode" when you open a new stream is "High Level", but you can change this default with the preference "MP2 Decoding Level" in MPEG Streamclip preferences. And this preference lets you set the audio level when you add files to the batch list without opening them in the player.

Likewise, whenever MPEG Streamclip encodes MP2 audio (or MPEG Layer 2 audio) from another sound format, another audio level is applied. With the preference "MP2 Encoding Level" in MPEG Streamclip preferences you can choose between two audio levels: "Normal Level" (default) and "High Level". If the converted movie has a very low sound volume, then you can use "High Level".

Please note the difference between the preferences "MP2 Decoding Level" and "MP2 Encoding Level". The first preference sets the playback volume and the conversion (decoding) volume from MP2 to other formats, while the second preference sets the conversion (encoding) volume from other formats to MP2.

MAKING A SELECTION
The selection is the part of the movie included between the In and Out points.
You can set the In and Out points, and therefore make a selection, in one of these alternative ways:
– drag the playhead (from In to Out or from Out to In) while holding down the Shift key;
– move the playhead to the In (or Out) point, then hold down the Shift key and move the playhead to the Out (or In) point;
– move the playhead to the In point and hit the I key, then move the playhead to the Out point and hit the O key;
– choose "Go to Time" in the Edit menu and enter a selection (two times and a "-" character in between).
The selection will be highlighted in the player.
To cancel a selection, you can use the X key, or choose "Cancel Selection" in the Edit menu. You can also cancel the selection with "Select All" in the Edit menu, or Command-A.
Please note that, while the In point is included in the selection, the Out point is not included.

You can also move the playhead to the desired In and Out points using JKL navigation (an explanation of JKL navigation can be found later in the section "Playing the stream"), or with the navigation buttons, and use the left and right arrow keys to step the playhead through single frames, or the up and down arrow keys to step through keyframes. If you hold down the Option key, you can use the left and right arrow keys to jump directly to the In and Out times.

With the "Go to Time..." command of the Edit menu you can go to a specific point of the stream by entering its timecode (with or without colons). If the timecode is followed or preceded by "-" respectively the In point or Out point will be changed; if you enter two timecodes separated by "-" both the In and Out points will be changed and a new selection will be set. With the same command you can read, copy and paste the current timecode and the current selection.

TRIMMING THE STREAM

Once you have made a selection, you may choose to trim the selected portion, temporarily cutting away anything before the In point and after the Out point. Use "Trim" from the Edit menu, and the movie will be trimmed to the selected portion (or something less, according to keyframe positions); you can then perform further (and finer) selections. "Trim" does not affect source files in any way.
If you want to undo the last trimming operation, you can use "Undo" from the Edit menu. If you want to undo all trimming operations you've done, you can use "Revert Trimming" from the Edit menu.

Trimming is not part of movie editing; it's just a way to temporarily restrict the part of the stream shown in the player and available for conversion and editing. You can use trimming without worries since you can revert it at any time without losing any editing you may have done to the stream. Also if you edit a part of the stream and then trim that part away, editing is not lost but just hidden; you can get it back at any time if you use "Revert Trimming".

So you can take advantage of trimming to make fine editing on smaller parts of the stream. E.g. with a long stream, you can select and trim the first 20 minutes, cut commercials, then revert trimming, select and trim the next 20 minutes, cut commercials, revert trimming and so on.

EDITING THE STREAM

Using "Cut" from the Edit menu, you can remove the selected portion of the stream (from In to Out; or something more, according to keyframe positions). This is useful if you want to remove commercials from the stream. You can make any number of cuts you want, and even cut a part that already contains one or more cuts.
You can locate each cut using the edit list (read "Using the edit list" below for more details).

With "Copy" and "Paste" you can copy a part of the stream and paste it in the same stream or in another compatible stream. You can also use "Cut" and "Paste" to move a portion of the stream. The part of the stream copied with "Copy" is, like for "Cut", the selection from In to Out (or something more); if there is no selection, "Copy" does a copy of the whole stream (if you trimmed the stream, only the trimmed part will be copied). The part of stream copied with "Copy" or "Cut" is preserved when you close the stream, so you can use "Copy", close the stream, open another stream and use "Paste". This is the preferred method to join two or more streams; however all the streams must have the same PIDs, the same start codes, and the same audio/video properties (that is, they must come from the same source or channel).

For MPEG files, editing is performed at MPEG level; video is reassembled and audio is resynchronized. Audio/video sync is ensured even when a large number of cuts is present in the same stream.
Editing does not alter the source files; you must use Save As to save the edited movie into another file.
You can undo the last "Cut", "Copy", "Paste" or "Trim" using "Undo" from the Edit menu ("Undo" works only once, multiple undo is not supported). You can undo all your editing and trimming using "Revert All Changes" from the Edit menu.

For QuickTime files, editing and trimming operations are frame-accurate. But for MPEG files, these operations are not frame-accurate since MPEG packs pictures into GOPs (Group Of Pictures) usually with a duration of half a second. MPEG Streamclip does not split GOPs, so the accuracy of editing is about 1/2 second; but the accuracy of audio/ video sync after editing is much higher, and usually less than 1/2 frame, regardless of the number of cuts.

Please note that for MPEG files, by default, Trim leaves "at most" the selection, while Cut removes "at least" the selection and Copy copies "at least" the selection. But if you enable the preference "Preserve GOPs at In/Out" this behavior changes: Trim leaves "at least" the selection, Cut removes "at most" the selection, while Copy still copies "at least" the selection. Editing and trimming can be accurate only if In and Out are both on keyframes; you can go to keyframes using the up and down arrow keys or the "Go to Keyframe" command in the Edit menu.

NOTE: sometimes, with some MPEG files, the Cut command may slightly corrupt one of the pictures that precedes the cut. This issue does not happen with most MPEG files.

MPEG Streamclip, by default, converts and saves all the audio tracks of MPEG files when you use "Convert to" or "Save As". With the command "Delete Audio Track" from the Edit menu you can remove the audio tracks you don't want to convert or save: just select the Audio PID of each track you want to delete and use "Delete Audio Track".

FIXING TIMECODE BREAKS
Some MPEG streams may have discontinue time code (this is particularly true for VOB

files). You can use "Fix Timecode Breaks" from the Edit menu to make MPEG Streamclip handle these streams correctly.
All timecode breaks found will be listed in the log window, and also in the edit list.

The option "Do not skip any frame" lets you control whether dropping some frames to fix a timecode break is acceptable or not. By default, this option is enabled for VOB/VRO streams and disabled for other streams. When enabled, "Fix Timecode Breaks" tries to preserve every frame, even if this results in bad video artifacts.

When you add files to the batch list with "Add Files" you can enable the "Fix timecode breaks" command and the "Do not skip any frame" option. The timecode will be then fixed in batch before conversion takes place.

In some cases, you can use this command to join two or more MPEG files into a single stream; but again, the files being joined must have the same PIDs, the same start codes, and the same audio/video properties. Using "Convert to MPEG" before joining the files can be helpful, because it changes PIDs and start codes to a default value. And you should not enable the option "Do not skip any frame" when joining files.
If the video transition between two files looks bad, you can use the Cut command to improve it.

USING THE EDIT LIST
The edit list contains a list of all the cuts you have made to the stream, and also all timecode breaks found by the "Fix Timecode Breaks" breaks command. To open it, please choose "Edit List" from the List menu.
Precisely, the edit list shows all segments of the stream included between two cut points (or two timecode breaks). For each segment, the Start Time and the Duration are listed.
If you double-click a segment, or click the "Select" button, the segment will be selected in the player. That is, the In and Out points will be changed to show the segment, and the playhead will be moved to the beginning of that segment.

THE LOG WINDOW
You can open the log window using "Log Window" from the List menu. The log window records the start and stop time of each conversion, and all error messages. The window also shows the position of all data breaks found during a conversion, and all timecode breaks found by "Fix Timecode Breaks"; when the option "Fix streams with data breaks" is enabled, the window may also show messages like "fixing video" or "fixing audio" that indicate where the stream has been fixed.
If you click "Check Stream" you can start a stream check; like a conversion, this will find and list in the log any data break found. With the "Clear" button you can clear the log.

SAVING THE STREAM
Use "Save As..." in the File menu to save a copy of the stream. If you set the In and Out points or trimmed the stream, only the part of the stream between the In and Out points

will be saved; otherwise, the whole stream will be copied.
If you have edited the stream, it will not be copied but it will be saved with editing instead.
Multiple source files will be joined into a single destination file, which may be larger than 2GB, if needed.
All the video and audio tracks will be saved, regardless of the selected video and audio PIDs, even if you have edited the stream. But audio tracks removed with the "Delete Audio Track" command will not be saved.

For QuickTime, DV, AVI, and MPEG-4 files you can choose the destination format among MOV, MP4, and AVI. Every movie can be saved as MOV, but only some movies can be saved as MP4 or AVI.
To save DivX files as AVI, you have to install a codec (DivX 6, 3ivx, or XviD). Some DivX files, when edited and saved as AVI, may not play well.

NOTE: Squared 5 assumes that you have the legal rights to make a copy of the stream!

EXPORTING TO QUICKTIME, AVI, MPEG-4
Select "Export to QuickTime..." or "Export to AVI..." or "Export to MPEG-4.." from the File menu and the Movie Exporter or the AVI/DivX Exporter or the MPEG-4 Exporter window will appear. It will let you export the part of the stream between the In and Out points (or the whole stream if In and Out points have not been set). If you have edited the stream, it will be exported as it appears after editing.

These are the available settings:

Compression
Using the Compression pop-up menu, you can choose the video compressor to use. The menu shows a list of all QuickTime video compressors installed in your computer; you can choose any compressor from this list (for MPEG-4 you can only choose between MPEG-4 and H.264). The default compressor is different for each exporter (Motion JPEG A for MOV, Photo-JPEG or DivX for AVI, MPEG-4 or H.264 for MP4).

Quality
You can use the Quality slider to set the quality of compression, from 0% (lowest) to 100% (highest or lossless). Some compressors may ignore this setting.

Options
If the video compressor has custom options, you can use the Options button to set them.

iTunes
This button takes the place of the Options button in the MPEG-4 exporter. It lets you quickly set the parameters to make MP4 files that are compatible with iTunes/iPod/ iPhone/Apple TV, by choosing among several presets. The last preset can be used with most mobile phones as well as the iPhone.

2-Pass/Multipass
If the video compressor is DivX 5.1.1, 3ivx, or XviD, x264, or H.264, by enabling this option you can make MPEG Streamclip automatically perform two-pass encoding. For H.264, more that two passes will be performed because the compressor performs a detailed analysis of the source movie to achieve excellent encoding results at the expense of very long encoding time; it also takes some space on your destination disk.

B-Frames
This option enables B-Frames (Bidirectional Frames) when encoding with H.264 and HDV. Using B-Frames yields better quality for the same data rate, or lower data rate for the same quality. But note that the iPod does not support B-Frames.

Limit Data Rate
You can enter a data rate limit for any codec that supports this feature. Select a proper unit (Kbps, Mbps, KB/sec, MB/sec) and enter a positive number. Decimal numbers are allowed.
When you enter a data rate limit, an estimate of the destination movie size appears. For most codecs, the data rate limit overrides the Quality setting.

Sound
With the pop-up menus you can set the sound format, choose between mono or stereo, set the sample rate and, if supported, the bit rate. Supported sound formats are Uncompressed, IMA 4:1, MPEG-4 AAC (MP4), AMR Narrow (AMR-NB), MPEG Layer 2 (MP2), and also MPEG Layer 3 (MP3) if you have installed DivX Pro 5.1.1. If you choose "Pass Thru" the original audio track of the stream (MP2, PCM or AC3) will be copied without changes in the MOV or AVI file. If you choose "No Sound", the exported file will have no sound.

Frame Size
A default frame size for the exported movie, based on the chosen video compressor and the aspect ratio of the source stream, will be proposed to you. If you don't like it, you can click and select a different frame size, and even enter any custom size between a small 32 x 32 and a huge 2048 x 2048.

Scaling is performed in the YUV color space, using a powerful 2D-FIR scaler. This scaler outperforms the built-in bicubic scaler of Final Cut Pro, bringing quite sharper pictures in less time. So, if scaling is required, It is recommended that you use MPEG Streamclip to make a scaled movie, rather than import the unscaled movie into Final Cut Pro and scale it there.

FIR scaling has excellent quality but it slows down the conversion. When scaling is not enabled, the conversion is fast; it is slow when either horizontal or vertical scaling is enabled; when both horizontal and vertical scaling is enabled, it's even slower.
You can disable FIR scaling by choosing the "unscaled" frame size; however, DV

codecs may still need to scale the picture using their own faster, low-quality scaling algorithms, resulting in a very bad video quality.

Scaling also includes some advanced TV standard processing. For instance, when MPEG Streamclip scales a 320 x 240 stream up to 720 x 480, it adds two 8-pixels wide black bars at each side of the picture, to conform to NTSC and PAL standards.

In the AVI exporter, if you choose a DivX-compatible codec, the frame size "720 x 576 (DV-PAL)" with rectangular pixels becomes "720 x 576 (DivX PAL)" with square pixels and cropped sides, to conform to DivX Home Theater profile.

Frame Rate
In this field, you can set the frame rate of the exported movie. If you leave this field empty, the frame rate will be the same as the original movie's frame rate (shown in the "Stream Info" window).

Frame Blending
If you set a frame rate for the exported movie which is different from the original movie's frame rate, you can enable this option to improve motion. Each frame in the exported movie will be a mix of two successive frames of the original movie.

If you left the Frame Rate field empty, this option has no effect unless the original move has a variable frame rate (that is, when in the "Stream Info" window the symbol "~" appears before the frame rate, e.g. ~20 fps, or when two video tracks are listed with different frame rate).

Field Dominance
This setting lets you choose the field dominance for the destination movie; it is automatically set to "Lower Field First" for DV and to "Upper Field First" for other codecs. Field dominance conversion is performed when the dominance of the destination movie is different from the dominance of the original file (visible in the Stream Info window).
The field dominance is the order in which the two fields that form NTSC and PAL pictures, are displayed in a TV set. You may need to change the default setting, if the converted file has bad motion when played on TV.

Field dominance is not changed for progressive files, and for files whose height is up to 288 pixels (like most MPEG-1 files) because these files can't have a field dominance.

Rotation
You can choose to rotate the picture by 90º, 180º and/or flip (mirror) it.
For 90º rotation, aspect ratio and scale factor will be preserved, resulting in a cropped and letterboxed picture. With 4:3 pictures you can then apply a 133.3% zoom to remove letterboxing, or a 75% zoom to get the full frame without cropping.
Interlacing will be preserved if "Interlaced Scaling" is enabled.

Zoom
In the field "%" you can optionally set a magnifying factor for the picture. With the field "X/Y" you can change the aspect ratio of the picture: the value 1.333 is good for 16:9 to 4:3 conversion, while the value 0.75 is good for the opposite conversion, from 4:3 to 16:9. A letterbox will be added, but you can remove it by entering in the field "%" a magnifying factor of 133.3 %. Finally, with the two fields "Center" you can move the picture center horizontally and vertically.

Cropping
With this feature, you can crop any edge of the frame: you just have to enable it and enter the amount of pixels you want to crop from each edge. Even numbers are preferred. Negative numbers are allowed: in most cases, they will add a black border to the picture.

You can choose between three different cropping modes: "Destination", "Source", "Scale".
With "Destination" (the default mode), cropping is relative to pixels in the *destination* movie, and the frame size of the resulting movie will be changed.
With "Source", cropping is relative to pixels in the *source* movie; the frame size of the resulting movie will not be changed, and the picture is stretched to fit the destination frame size.
With "Scale", cropping is relative to pixels in the *destination* movie; the frame size of the resulting movie will not be changed, and the picture is stretched to fit the destination frame size.

Note however that If you choose the "Destination" cropping mode with a DV frame size, MPEG Streamclip will use "Scale" instead.

Interlaced Scaling
If you are scaling an interlaced file to a different height, you can tell MPEG Streamclip to preserve interlacement and scale each video field separately by checking "Interlaced Scaling". If you don't, interlacement will be lost in the scaled movie, and, worse, you will get many visual artifacts. This setting is now enabled by default; remember to disable it with progressive files.

Interlacement requires a frame height of more than 288 pixels. If the frame height of the source file is up to 288, interlaced scaling will not be enabled. If the frame height you have chosen for the exported movie is up to 288 and you check "Interlaced Scaling", MPEG Streamclip discards the lower field before scaling the picture (i.e. it performs a fast deinterlacing by dropping one field).

Better Downscaling
If you are scaling the file to a smaller frame size, by checking "Better Downscaling" you can tell MPEG Streamclip to use a wider 2D-FIR scaler, providing even better picture

quality. However this wide 2D-FIR scaler is quite slow and the resulting picture (although perfect) may have less sharpness. This option is disabled by default: enable it only if you need a perfectly scaled movie.

If you are scaling the file to a larger size, this option has no effect; the standard 2D-FIR scaler already provides the best scaling quality.

Reinterlace Chroma

If you are converting an interlaced MPEG-1/MPEG-2 file, you may wish to "reinterlace" chroma. By checking "Reinterlace Chroma" you can enable a special remapping of 4:2:0 chroma lines so they will be split correctly between the two video fields. This is a very advanced option: only professional users may see the difference in the output movie. This option is enabled by default; disable it when you are sure your file is not interlaced.

This option has no effect if the source stream is not an MPEG-1/MPEG-2 stream.

Deinterlace Video

If you have an interlaced file, you may also want to deinterlace it, usually to convert into a progressive format, get a "film" effect and have a better playback on the computer's display. When you check the option "Deinterlace Video", MPEG Streamclip enables a special motion-adaptive deinterlacer, and it deinterlaces the lower field in the parts that contain motion, and preserves video quality of all parts that do not contain motion; the upper field is left unchanged. This option slows down the conversion.

Please note that if you are changing the height of an interlaced stream (that is, you are telling MPEG Streamclip to perform vertical scaling) then you must enable either "Interlaced Scaling" or "Deinterlace Video" (at your own choice), otherwise you will see bad video artifacts in the converted movie.

Adjustments

The Adjustments panel lets you adjust brightness, contrast, saturation and volume, and also enable automatic volume control. Adjustments take effect only if you click OK.

Presets

The Preset Manager lets you save on disk all the settings in the export window (including Options and Adjustments), and reuse them later. You can make a new preset with the button "New...", load the settings of a preset with "Load", store the current settings in an existing preset with "Save", and also rename and delete a preset, or move it up and down in the list with the arrow buttons.

Reset All

This button will reset all the parameters of the current exporter to default, including custom options for all video compressors. Parameters that are shared with other exporters will be reset as well.

Fast Start
This option appears in the QuickTime exporter and lets you make a fast-start MOV file (a movie that starts before being downloaded completely). This option is not available in the AVI exporter (never fast-start) and in the MP4 exporter (always fast-start).
Note that making a fast-start MOV or MP4 file requires a free disk space of at least twice the final movie size.

Make Movie - Make AVI - Make MP4
When all your settings are OK, you can finally click the "Make Movie" or "Make AVI" or "Make MP4" button, choose the name and location of the MOV or AVI or MP4 file, and MPEG Streamclip writes the movie to the specified location. While writing the movie, MPEG Streamclip takes sample pictures from it and decompresses them immediately. This lets you check the compression quality while encoding goes on: so you can stop the encoding and change some settings if the quality is lower than expected. You can disable the preview window in preferences, if you want.

To be clear: the pictures you'll see during the movie encoding are taken from the exported movie, not from the source MPEG file: so you can really check the video quality of the QuickTime or AVI or MPEG-4 movie you're making.

Preview
If you just want to check the video encoding quality without actually writing the movie, you can click the "Preview" button instead of "Make Movie". MPEG Streamclip simulates the encoding process and takes sample pictures from the "virtual" destination movie. With this feature, you can fully adjust your compression settings before writing anything to disk.
You can use the Window menu to resize the preview window and see the encoded frame at full size.

AUDIO AND VIDEO FORMATS SUPPORTED IN AVI FILES
MPEG Streamclip makes an AVI 1.0 file, with all the limitations of this format (for example, the file cannot exceed 4GB). And many video and audio codecs are not supported in AVI files.

- Supported video codecs are DV, Cinepak, BMP, JPEG, DivX 6.x and 5.2.1, 3ivx and XviD.
- You can download DivX (version 6.7 at the time of this writing) from http://www.divx.com/.
- This version of MPEG Streamclip contains a special DivX codec adapter, compatible with DivX 6.x and 5.2.1, so you can finally use DivX 6 as a codec, even if DivX 6 does not actually include a codec but only an exporter. Using the DivX codec with the adapter requires at least 500 MB of free space on your startup disk.
- Future DivX versions may break the codec adapter, so please make a backup of the current DivX installer.

- You can download 3ivx (version 5.0.1 at the time of this writing) from http://www.3ivx.com/
- You can download XviD (version 0.5.1 at the time of this writing) from http://n.ethz.ch/student/naegelic/ (for Intel, please download the disk image "XviD_Avi_Import_Preview4_intel", and install the components "XviD_Codec-r58" and "AviImporter-r7").
- Some PAL devices cannot play 768 x 576 DivX files; in this case, use the special frame size "720 x 576 (DivX PAL)". This frame size preserves the square pixel aspect ratio by cropping both sides of the picture, and unlike 720 x 540 it preserves interlacement.

- Supported audio codecs are Uncompressed, MPEG Layer 2 (MP2), MPEG Layer 3 (MP3), AC3.
- The MPEG Layer 3 codec appears only if you installed DivX 6.x or DivX Pro 5.2.1.
- You can put AC3 sound in AVI file with the "Pass Thru" option, only if the sound of the source MPEG file is in AC3 format. To play the AVI file with AC3 in MPEG Streamclip you don't need to install any codec; however if you want to play that file in QuickTime you need to install an AC3 codec.
- The codec Apple IMA 4:1 is not supported in AVI files: if you select it, the μlaw 2:1 codec will be used instead (at least in this version of MPEG Streamclip). And the codecs MPEG-4 AAC and AMR Narrow are not supported in AVI, too.
- The AVI files will be created with a CBR (constant bit rate) audio header. If audio doesn't have a constant bitrate, or if the sample rate is 44.1 kHz and the codec is MPEG Layer 2, a little audio/video sync problem may happen in very long movies. In this case you can write a VBR (variable bit rate) audio header by enabling the option "VBR Audio" in preferences. Not all players can play AVI files with VBR header.

EXPORTING TO DV STREAM

Select "Export to DV..." from the File menu and the DV Exporter window will appear. This will let you export the part of the stream between the In and Out points (or the whole stream if In and Out points have not been set) as a DV stream. Again, if you have edited the movie, it will be exported with all your editing.

The Compression pop-up menu lets you select the video compressor to be used. You have three options: DV (DV25), DVCPRO25, and DVCPRO50. For iMovie, you must use the first one.

The Standard pop-up menu lets you select the standard to be used for the stream: PAL or NTSC. It is automatically set to PAL for 24, 25, 50 fps, and to NTSC for other frame rates, but you can change this default if you need to match the standard used in your iMovie or Final Cut project.
The frame size is set to 720 x 576 for PAL and 720 x 480 for NTSC; the 2D-FIR scaler will be used if necessary.

The Aspect Ratio pop-up menu lets you choose whether the DV stream should be

considered as a 4:3 or a 16:9 movie. This setting does almost nothing, except that it changes a bit in the DV stream, making it easier to import in applications like iMovie HD.

Field dominance for DV streams is always lower field first, so there isn't a setting for this. Dominance conversion is performed when the original MPEG file is upper field dominant.

The "Frame Blending", "Interlaced Scaling", "Better Downscaling", "Reinterlace Chroma" and "Deinterlace Video" options have been already described in the previous paragraph.
The setting "Resample Audio to 48 kHz" changes the sample rate of the audio track to the highest rate available for DV; it does nothing when the sample rate of the source stream is already 48 kHz.
Please check "Split DV Stream in Segments" if you want to import the DV stream in iMovie. This options splits large DV streams in 1.9GB files; a 3-digit suffix is automatically added to the name of DV files following the first one.

The settings "Rotation", "Zoom", "Cropping" and the buttons "Presets" and "Adjustments" have been described in the previous paragraph. For "Cropping" the option "Scale" is not available because for DV, "Scale" cropping is the same as "Destination" cropping.

With the Preset Manager you can save the settings of the DV exporter. DV presets are listed together with MOV/AVI presets but you cannot load a DV preset in the MOV/AVI exporter and vice versa. Some settings are shared by all exporter windows (for instance, "Zoom", but not "Cropping"): if you load a preset in one exporter, these shared settings will be changed in all exporters.

The "Preview" and "Make DV Stream" buttons work in the same way as the "Preview" and "Make Movie" buttons of the Movie Exporter window; of course "Make DV Stream" writes a DV file and not a MOV file.

You can preview the video compression quality for a DV stream, too, and, if needed, change your settings before writing the DV stream.

EXPORTING AUDIO
Select "Export Audio..." from the File menu and the Audio Exporter window will appear. This will let you export the audio track of the stream between the In and Out points (or the whole audio track if In and Out points have not been set) plus any editing. For MPEG streams you can choose the audio track to export with the Audio PID setting.

You can choose the format of the exported audio file: AIFF, MP4/AAC, MP3, MP2; however the MP3 format is available only if you have installed DivX 6. You can set the sample rate, the bitrate and the number of channels of the exported file. With

"Adjustments..." you can change the volume or enable automatic volume control.

For MPEG streams, you can make an AIFF file with both Export Audio and Demux to AIFF. However these commands are different: with Export Audio you have more settings and you can control the sample rate and channels, while Demux to AIFF is a litte faster.

Multichannel surround sound is not yet supported by Export Audio: however this may change in the future.

EXPORTING TO OTHER FORMATS

Select "Export to Other Formats..." from the File menu and the Other Formats exporter window will appear. This will let you export the part of the stream between the In and Out points (or the whole stream if In and Out points have not been set) to other movie or sound formats. If you have edited the movie, it will be exported with all your editing.

This command is similar to Export to QuickTime, but instead of the list of video compressors you will see a list of QuickTime-compatible video and audio exporters installed in your Mac, from which you can choose with the "Format" selector. The format of the exported file depends on the exporter chosen with "Format"; for instance the 3G exporter will make a .3gp file, the Wave exporter will make a .wav file, and so on.

The "Options..." button in the exporter window lets you set additional exporter options (e.g. quality, frame rate, bit rate, advanced settings) if the chosen exporter supports them. If you choose an MPEG-4 exporter that has no options, the "Options..." button becomes "iTunes..." allowing you to choose an iTunes preset.

So this command lets you use most QuickTime-compatible exporters with MPEG Streamclip, much like you were using QuickTime Pro, but with the higher quality and performances of MPEG Streamclip. But note that only some exporters are recognized by MPEG Streamclip, and their behavior may be significantly different than that shown in QuickTime Pro. Some supported exporters are 3G, AIFF, iPod, iPhone, Apple TV, QuickTime, AU, AVI, Wave, DV, MPEG-4. Also note that there may be compatibility issues with some exporters.

While "Export to Other Formats" can make QuickTime (MOV), AVI, DV, MPEG-4 (MP4) movies it is highly recommended that you make these movies with "Export to QuickTime", "Export to AVI", "Export to DV", "Export to MPEG-4" since these commands are faster than "Export to Other Formats", have better quality, use multiprocessing, and give a preview of the destination movie.

The preview window in "Export to Other Formats" shows the pictures BEFORE ENCODING, not after encoding like in other export commands. To check the actual video quality you have to open the destination file. You don't have to export the whole movie to check the quality since in most cases, if you stop an export operation you may

still get a valid exported file.

The "Export to Other Formats" command is compatible with Elgato Turbo.264. If you have this hardware encoder, you can choose one of the Turbo.264 exporters and encode your H.264 movies with MPEG Streamclip nearly in realtime.
And MPEG Streamclip improves Turbo.264, adding full data rate control and encoding support for HD movies up to 1600x900 by automatically using rectangular pixels. Note that when you encode an HD movie with a frame size larger than 768x576 with Turbo.264, you have to accept some quality loss due to rectangular pixels (the picture may appear a little blurred), but in most cases the quality is still very good, especially if you watch it on the Apple TV, and the encoding speed is much higher.

The "Export to Other Formats" command is also compatible with Flip4Mac WMV Studio and 3ivx Media Exporter. It is even compatible with the free Real Export Plug-in (http://www.realnetworks.com/products/realexport/): to use this plugin on Intel Macs, you have to open MPEG Streamclip with Rosetta.

EXPORTING A FRAME
You can export the frame shown in the player in a JPEG, TIFF, PNG file using "Export Frame..." in the File menu. You can change the frame size (or choose the original size with "Unscaled") and you can set the options "Interlaced Scaling" and "Deinterlace Video" for interlaced streams. You can also adjust the picture with the Adjustments, and choose the gamma between 2.2 and 1.8. As usual, the picture will be resized with the 2D-FIR scaler.

The two options in "Pixel Aspect" make a little (nearly unnoticeable) correction to the picture aspect. Choose "Computer Graphics" if you want to use the picture in a computer graphics or photo application. Choose "Industry Standard" if you want to use the picture in a video application. These options have effect only if the frame size is 4:3 or 16:9.

CONVERTING THE STREAM
The following commands are available only if the source stream is in MPEG-1 or MPEG-2 format; they do not require the Apple MPEG-2 Playback Component.
Choose one of the "Convert to" or "Demux" commands from the File menu to perform the desired conversion or demuxing. Again, only the part of the stream between the In and Out points will be converted or demuxed; also, editing will always be included in the converted files.
These conversions run as fast as possible and they are just limited by the hard disk speed and the audio conversion speed. When no audio conversion is required, they usually perform at the same speed of a Finder copy; with audio conversion they will run slower, depending on the processing speed of your Macintosh.
Destination files may exceed 2GB, and will not be split. However you can change the In and Out points to make smaller destination files, if you need.
All the files written by these commands (when In and Out points are the same) have the

same duration, the same start and end time, and they are kept synchronized by a special time-detection technology. So you can perform multiple conversions and use the resulting files together.
All "Convert to" commands except "Convert to TS REC" and "Convert to TS VID" will convert all the audio tracks, unless you enable the preference "Convert only one audio track".

This is a brief description of the available commands:

Convert to MPEG...
converts the stream into a muxed MPEG (program stream) file; if the frame size is suitable, you can import this file in Toast 6, 7, 8 or Sizzle and burn it directly, with no encoding time and no loss of quality. Audio is left in its original format (MPEG, AC3 or PCM).
Suitable frame sizes for DVD are 720x480, 720x576, 704x480, 704x576, 352x480, 352x576. If the frame size is not suitable, please try the "Convert to Headed MPEG" command instead. The "headed" conversion is not required for Sizzle.
If Toast stops with an error before burning the file, please enable the option "Fix streams with data breaks" in preferences and try again.

IMPORTANT: if you still have Toast 6, please update it least to version 6.0.9. Previous Toast versions could alter audio/video sync of muxed MPEG files; this no longer happens in Toast 6.0.9 and later, or in Toast 7 or 8.

Convert to MPEG with MP2 Audio...
same as "Convert to MPEG", but converts AC3 and PCM audio into MP2 (MPEG) audio so you can play the converted MPEG file using QuickTime (to play MPEG-2 in QuickTime you must have the MPEG-2 Playback Component, of course).

Convert to Headed MPEG...
same as "Convert to MPEG" but adds a special header to the MPEG file that lets you import unsupported frame sizes into Toast 6, 7, 8 and skip recompression. However, DVDs made from "headed" MPEG files are not guaranteed to work with all players. Please DO NOT TRY to open "headed" MPEG files in QuickTime Player (it will crash). Also never try to burn a DVD from MPEG-1 or high-definition MPEG-2 with Toast 6 (it will hang).
The headed conversion shall not be used for Sizzle.

Convert to TS...
converts the stream into a transport stream file; the TS file can be uploaded and played in most PVR devices.

Convert to TS with MP2 Audio...
converts the stream into a transport stream file and turns AC3 and PCM audio into MP2 (MPEG); so the TS file can be played in PVR devices (like the DreamBox) that do not

support AC3/PCM playback.

Convert to TS REC...
converts the stream into a transport stream file for Topfield PVR, with the REC header and extension, and MP2 sound. The REC file can be played with the Topfield 5000 devices.

Convert to TS VID...
converts the stream into a transport stream file for Humax PVR, with the VID format and extension, and MP2 sound. The VID file can be played with the Humax 8000 devices.

Demux to M2V and AIFF...
demuxes the stream and creates an M2V video file and an AIFF audio file; if the frame size is suitable, you can import these two files in DVD Studio Pro or Toast 6, 7, 8, and burn them directly, with no encoding time and no loss of quality. The video and audio files have the same exact duration, the same start and end time, and are perfectly synchronized.
If you use the same name for the two files, you can double-click the M2V file and open both files in QuickTime Player (again, to open MPEG-2 files in QuickTime you need the Apple MPEG-2 Playback Component).
If the frame size is not suitable, please try "Demux to Headed M2V and AIFF". Note that DVD Studio Pro only accepts 720x480 and 720x576 frame sizes.

Demux to M2V and M1A...
demuxes the stream and creates an M2V video file and an M1A audio file (which holds MP1/MP2 audio); if the frame size is suitable, you can import these two files in DVD Studio Pro or Toast 6, 7, 8, and burn them directly with no encoding time and no loss of quality. For muxed files that have MPEG audio, this command runs faster than "Demux to M2V and AIFF", because no audio conversion is performed; also, the resulting files take less space in the DVD.
If the frame size is not suitable, please try "Demux to Headed M2V and M1A".

Demux to M2V and AC3...
demuxes the stream and creates an M2V video file and an AC3 audio file; if the frame size is suitable, you can import these two files in DVD Studio Pro or Toast 6, 7, 8, and burn them directly with no encoding time and no loss of quality. For muxed files that have AC3 audio, this command runs faster than Demux to M2V and AIFF, because no audio conversion is performed; and again, the resulting files take less space in the DVD.
You can't use this command if the audio track is not in AC3 format.
If the frame size is not suitable, please try "Demux to Headed M2V and AC3".

Demux to M2V...
demuxes the stream and creates an M2V video file. Use this command if you want to extract just the video track.

Demux to AIFF...
demuxes the stream and creates an AIFF audio file. Use this command if you want to extract just the audio track.
Use this command 4 times (changing the Audio Mode to "L/R Ch", "Center Ch", "LS/RS Ch", "LFE Ch") if you want to extract all the channels of AC3 audio.

Demux to M1A...
demuxes the stream and creates an M1A audio file. Use this command if you want to extract the audio track of a file with MPEG audio, and use it in DVD Studio Pro or Toast.

Demux to AC3...
demuxes the stream and creates an AC3 audio file. Use this command if you want to extract the audio track of a file with AC3 audio, and use it in DVD Studio Pro or Toast. You can't use this command if the audio track is not in AC3 format.

Demux to Unscaled M2V and AIFF...
demuxes the stream and creates an "unscaled" M2V video file and an AIFF audio file; you can import these two files in Final Cut Pro 4 or HD (and also in Final Cut Express if you have the MPEG-2 component); usual rendering time is required. Please DO NOT use drag & drop to import the files (Final Cut may crash due to an internal bug), but open the M2V file using the File menu and the AIFF file will be automatically linked (if you used the same name for the two files).
The "unscaled" M2V file is a demuxed file which tells QuickTime and Final Cut to not prescale it, e.g. to 720 x 540; it preserves its original size e.g. 720 x 576 or 720 x 480 so you won't lose quality when you render it. This is a special feature of MPEG Streamclip.

Demux to Headed M2V and AIFF...
same as "Demux to M2V and AIFF" but adds a special header to the M2V file that lets you import unsupported frame sizes into DVD Studio Pro or Toast 6, 7, 8 and skip recompression. Again, DVDs made from "headed" M2V files are not guaranteed to work with all players. Please DO NOT TRY to open "headed" M2V files in QuickTime Player (it will crash); and DO NOT TRY to play the beginning of the M2V in DVD Studio Pro (it will quit suddenly). Also never try to burn a DVD from MPEG-1 or high-definition MPEG-2 with Toast 6 (it will hang) or DVD Studio Pro 2 or 3 (it will not multiplex it).

Demux to Headed M2V and M1A...
same as "Demux to M2V and M1A" but with the "headed" M2V file that lets you import unsupported frame sizes in DVD Studio Pro and Toast 6, 7, 8.

Demux to Headed M2V and AC3...
same as "Demux to M2V and AC3" but with the "headed" M2V file that lets you import unsupported frame sizes in DVD Studio Pro and Toast 6, 7, 8. You can't use this command if the audio track is not in AC3 format.

Demux to Headed M2V...
same as "Demux to M2V" but with the "headed" M2V file that lets you import unsupported frame sizes in DVD Studio Pro and Toast 6, 7, 8.

A warning message will tell you if there are data breaks in the stream. A data break means that the stream is corrupted.
If the file being converted has data breaks, audio/video sync may be lost. In this case, please enable "Fix streams with data breaks" in preferences before doing the conversion, and MPEG Streamclip will try to recover A/V sync.

PLAYING THE STREAM
You can use this application to play (even at full screen) QuickTime, DV, AVI, MPEG-4 files; but above all, you can play MPEG-1 and MPEG-2 (if you have the MPEG-2 Playback Component) muxed files with MPEG, AC3, PCM audio, demuxed M2V files with AIFF audio, and transport streams with MPEG or AC3 audio.
Playback of MPEG-2 files requires a Macintosh with a fast G4 processor (especially when playing files with AC3 or PCM audio); please do not expect to get full frame rate playback on a G3 computer.
Open a stream, and then start playing it in the usual ways: double-click the picture, or hit the space bar on keyboard, or click the play button ▶.

You can also start playback using the L key, since the player supports JKL navigation. This is a quick explanation of JKL navigation: the L key starts forward play at 1x, 2x, 4x, 8x... doubling forward speed (or halving backward speed) each time you hit L; the J key starts backward play at -1x, -2x, -4x, -8x... doubling backward speed (or halving forward speed) each time you hit J; the K key stops playback.

You can resize the player window using the commands in the Window menu. Still with the Window menu, or with Command-0 (zero) you can start full screen playback. You can zoom the picture with the up and down arrow keys; you can go back to normal playback by clicking the mouse or pressing Esc or 0 (zero) or Command-0 or even Command-W.
Most navigation keys can be used in full screen mode.

You can use the up and down arrow keys to reach the previous or next keyframe (for MPEG files, the first I-frame of the GOP); also, you can use the command "Go to Keyframe" in the Edit menu to get to the nearest keyframe. The other two arrow keys, as usual, move the playhead by one frame. Yo can also move through frames using the scroll wheel of your mouse, if you have it (the Option key makes scrolling faster).

You can also use the up and down arrow keys to set the sound volume. Command + Up/Down or Ctrl + Up/Down increases/decreases the volume; Command + Shift + Up or Ctrl + Shift + Up raises volume above its maximum; Option + Up/Down turns sound on/off.

The Home and End keys can be used to jump about 1 minute forward/backward; for some streams these keys may attempt to reach a keyframe for faster access.

With the "Go to Time..." command of the Edit menu you can go to a specific point of the stream by entering its timecode (with or without colons).

There are 5 navigation buttons under the player; this is how they work:
▶: starts/stops forward play at normal speed;
▷: starts forward play; doubles forward speed at each click (same as L key);
◀: starts backward play; doubles backward speed at each click (same as J key);
▶▶: jumps 10 seconds forward (same as Page Down);
◀◀: jumps 10 seconds backward (same as Page Up);
Option + ▶: starts repeated playback of the current selection, from In to Out (same as Option-K);
Option + ▷: starts slow motion; halves slow motion speed at each click (same as Option-L);
Option + ◀: starts backward slow motion; halves slow motion speed at each click (same as Option-J);
Option + ▶▶: jumps 1 minute forward (same as Option-Page Down and Ctrl-Page Down);
Option + ◀◀: jumps 1 minute backward (same as Option-Page Up and Ctrl-Page Up).
If you hold down the Shift key, you can extend the selection with the four arrow keys, Page Up/Down, the ▶▶ and ◀◀ buttons or the scroll wheel.
The skip interval of the ▶▶ and ◀◀ buttons, initially 10 seconds, can be changed in preferences.

You can play a file or stream even while you are exporting, converting or saving it: however, in this case, both the playback and the conversion will slow down.
Please select the correct audio and video PIDs before playing a stream with multiple audio or video tracks; if you don't, a default audio and video track will be played.

If you open an MPEG-2 file or stream, but you have not installed the MPEG-2 Playback Component, an empty player will appear. It won't play anything but it will let you set the In and Out points for the conversion.

The Apple MPEG-2 Playback Component cannot play files larger than 4GB. For this reason, MPEG Streamclip has to play large streams in blocks of 4GB max; consequently, at each 4GB boundary, audio and video may stop for a while.

USING BATCH PROCESSING
If you want to use batch processing, please open the batch list using the List menu. The batch list shows a queue of tasks that will be executed when you click the Go button.

If you have many files you want to convert, you can click the "Add Files" button, or drag & drop the files into the batch list. You will be asked to choose a task and a destination directory. You have the option to fix timecode breaks and join selected files. For export, you will also need to enter the export settings, unless you enable the option "Use previous folder and settings": this option is available only if you previously used "Add Files".
PIDs for the conversion will be chosen automatically for each file.
Loading all files in the batch list may take time: you can stop the process with Command-. or Esc, if necessary.

But there is another way to fill the batch list. In fact, while the batch list is open (even when hidden behind other windows) every conversion you choose in the File menu will be added to the batch list instead of being performed immediately (so remember to close it when you want to do an immediate conversion). This includes Save As, Export to, Convert to, Demux to; and even Download and Upload from/to supported PVR devices. The source stream used is of course, the one shown in the player.
If you add tasks this way, all editing, trimming, In/Out points, and chosen PIDs, will be saved in the batch list; thus a batched conversion gives the same results as an immediate conversion. If you then make further changes to the source stream in the player, these changes do not affect editing, trimming, In/Out points, and PIDs stored in the batch list. And you can even close the stream and open another stream in the player if you want; all conversion data will remain in the batch list until you delete the task or quit the application.

You can start batch processing with the "Go" button. The button's name will change to "Stop", if you click it again, processing of further tasks will be stopped but the currently running task will continue till completion. To stop the running task and all subsequent tasks, you can use the "Stop" button in the progress window.
If you enable "Automatic start", batch processing will automatically start as soon as you add a new task to the batch list.
If you set the number of "Simultaneous tasks" to more than 1, several tasks will be performed at the same time. The progress window shows the status of only one task: click on a particular task in the batch list to watch its progress. But if you click "Stop" in the progress window, all running tasks will be stopped at once. Not all tasks can be performed simultaneously.

The initial status of a task is "Waiting". If you click the "Hold" button you can change the status to "Held" and then back to "Waiting". When a task is "Held" it will be skipped during batch processing, but it remains in the batch list.
Once executed, the status of a task changes to "Completed"; if unsuccessful, the status reports the error message. To execute the task again, you need to change the status back to "Waiting" by using the "Repeat" button.

You can change the processing order of tasks by selecting one task and using the "Up"

and "Down" buttons. You can remove a task from the list using the "Delete" button, or all tasks using the "Clear" button.
You can change the destination folder of one or more tasks with the "Redirect" button; and with the "Script" button you can choose a script to be executed when all tasks have been completed.

USING MPEG STREAMCLIP WITH THE DREAMBOX

The DreamBox (http://www.dream-multimedia-tv.de) is a DVB set-top box. It comes in several versions (for satellite and digital terrestrial TV), with or without the hard disk. All these versions are supported.
The Enigma menu allows MPEG Streamclip to connect directly to the DreamBox, through the Ethernet interface. To enable this menu, please enter the IP address of your DreamBox in MPEG Streamclip preferences. You have to enter the password only if different from "dreambox".

If you select "Files...", the "Enigma Files" window will open, showing the files that are in the "movie" folder of the DreamBox hard disk. You can update the file list at any time with the "Refresh" button. If you click the "Open" button (or double-click a file), you can open and immediately play a file in the player, you don't need to download it before.
With the "Upload" and "Download" buttons you can upload/download one or more .ts files to/from the DreamBox. Using "Upload" you can also upload to the DreamBox, the stream that is currently in the player, from In to Out. The stream will be automatically converted to .ts while uploading. And, since you can open any DreamBox file in the player, this means that you can even upload a DreamBox file to the DreamBox, after any editing or trimming, without passing through your Mac's hard disk.
If the batch list is open, or if you select more than one file, Upload and Download tasks will be added to the batch list so you can execute them in batch.
Once the .ts file has been uploaded, you need to update the movie list that is in the "recordings.epl" file. This procedure can be done by clicking the "Rebuild" button and forces the DreamBox to reboot.
For this reason, uploading a file in the "movie" folder is not recommended: you would better use the the "lost+found" folder for uploaded files, and leave the "movie" folder for TV recordings. In the Enigma Files window, you can go to the "lost+found" folder with the "lost+found" button and, with the "movie" button, you can go back to the "movie" folder; in the DreamBox, you can go to the "lost+found" folder in File mode, by choosing "Root" (red key on remote), then "harddisk" and "lost+found/".
With the "Delete" button you can delete a file from the DreamBox. You will be asked 3 times for confirmation. One of these three messages will contain a mini-player that will let you see the .ts file for the last time, and realize what you are going to delete. You can disable the player by holding down the Option key while you click the Delete button; this can be useful if, for some reason, MPEG Streamclip hangs before the player appears. Still with the Option key, you can select and delete many files at once.

If you select "Recorder", the "Enigma Recorder" window will open, and, if the DreamBox is on, the name and the screenshot of the current TV channel will appear, with the OSD

(on-screen display) if present. Also, a remote control for the DreamBox will appear.
With the "Start Box Recording" button you can remotely start/stop recording on the DreamBox hard disk. A red signal near the button will tell you whether a recording is in progress.
With the "Start Mac Recording" button you can start recording on your Mac's hard disk. You will be asked to choose a folder and a name for the .ts file to be recorder; however, to make this procedure faster, MPEG Streamclip goes to the last folder used for recording and proposes a unique file name, using the channel name and the current date and time. This feature is just what you need to use MPEG Streamclip with a DreamBox that has no internal hard disk.
In both cases, the TV channel shown in the window is the same shown by the DreamBox, and not necessarily the one being recorded; you must avoid changing channel while recording on Mac, because the data flow may stop.
You can't start recording on Mac and on DreamBox at the same time.
Enigma Recorder, used with the DM-7000, requires at least the 1.08 firmware; the remote control requires at least the 1.09 firmware.

If you select "Web Interface" the browser "Enigma Web Interface" will appear. This browser has limited functionality, but enough to operate the Enigma web interface. It is powered by Safari.
With the "<" and ">" buttons you can go to the previous and next page. The "Reload" button reloads the web interface, while the "Refresh" button reloads the current page.

If you select "Easy Firmware" the window "Enigma Easy Firmware" will open. This window lets you update the firmware in the flash ROM, and install multiboot images in a USB stick connected to the DreamBox.
Enigma Easy Firmware has been included in MPEG Streamclip only for your fun: Squared 5 does not take any responsibility for proper or improper use of this tool, and for any consequent damage that might happen.
Enigma Easy Firmware is not yet compatible with the DreamBox DM 7020. But you can still use "Backup Settings" and "Restore Settings" in the 7020 without problems.
When you open it, the window shows some data like the presence of DreamFlash, the name of the active image, the size of USB stick, and the names of multiboot images already installed on USB. You can update these data at any time using the "Refresh" button.
With the "Update Firmware" button you can install a firmware image in the flash ROM. Please keep DreamUP and Virtual PC ready: if the update fails you might need them.
The button "Backup Firmware" will let you recover the firmware stored in the flash ROM and will store it in a .img file.
With the "Install DreamFlash" and "Remove DreamFlash" buttons you can install or remove the DreamFlash plugin, required for starting multiboot images. For the firmware 1.09 you must use DreamFlash 2.5 or later; for the firmware 1.08.x you must use earlier versions of DreamFlash (2.0 through 2.3a). Please click "Install DreamFlash" and follow the instructions. When DreamFlash is installed, don't forget to configure it by pushing the blue key of your remote control, and choosing "DreamFlash". Select "USB Stick"

and don't change any default setting. DreamFlash is a copyright of Mechatron and is therefore not included in MPEG Streamclip; you can download it from: http://www.bernyr.de/
With the "Backup Settings" and "Restore Settings" buttons you can respectively save on your Mac the settings of the currently active image, and restore the previously saved settings in the active image. Of course you can use "Restore Settings" to load one image's settings in the other images. Settings are stored in a .tgz file and they include only basic settings of Enigma. If you need to save/restore more settings, you can use the software DreamXman.
Note that "Restore Settings" will force the DreamBox to reboot.
With the "Format" button you can format the USB stick, completely erasing all its content. You will be asked twice before proceeding.
With the "Install Image" button you can install a multiboot image in the USB stick. The procedure is automatic and you don't have to use your remote control. Also, some essential settings (like IP address and language) are automatically copied from the active image to the installed image. The list of installed images will appear on the DreamBox display at reboot, and you will be able to choose the image to be used with your remote control.
With the "Rename Image" button you can change the name of installed images, while with the "Delete Image" button you can delete an image and its settings.
Finally, the "Reboot Box" button will let you reboot the DreamBox: useful if you want to activate another firmware image.

USING MPEG STREAMCLIP WITH THE TOPFIELD TF5000PVR/TF5500PVR
The Topfield TF5000PVR/TF5500PVR (http://www.topfield.co.kr) is a DVB set-top box. The TF5000PVR comes in two versions: one for satellite and the other for digital terrestrial TV. There are also other devices in the same family, like the TF5800PVR, the TF5010PVR, the TF5100PVR and the TF5510PVR; they are usually supported.
The Altair menu allows MPEG Streamclip to connect directly to the Topfield TF5000PVR/TF5500PVR, through the USB interface. To enable this menu, please select "Enable Altair" in MPEG Streamclip preferences.

If you select "Files...", the "Altair Files" window will open, showing the files that are in the "\DataFiles" folder of the Topfield hard disk. You can update the file list at any time with the "Refresh" button. If you click the "Open" button (or double-click a file), you can open and immediately play a file in the player, you don't need to download it before (for smooth playback, you must have an USB 2.0 port on your Mac). With the "Upload" and "Download" buttons you can upload/download one or more .rec or .ts files to/from the Topfield. Using "Upload" you can also upload to the Topfield, the stream that is currently in the player, from In to Out. The stream will be automatically converted to .rec while uploading. And, since you can open any Topfield file in the player, this means that you can even upload a Topfield file to the Topfield, after any editing or trimming, without passing through your Mac's hard disk.
You can change folder, if you wish: with the "Up" button (or double clicking "..") you can go up to the parent folder, with the "Data" button you can go back to the \DataFiles

folder, and if you want to go into a subfolder, just double-click it.
In the \DataFiles folder and in its subfolders you can only upload/download files with the .rec extension. In the other folders, with the Upload and Download buttons you can upload/download files with any extension. For instance, in the \ProgramFiles folder you can upload .tap files, while in the \MP3 folder you can upload .mp3 files. And you can even upload and download a folder with all subfolders.
If the batch list is open, or if you select more than one file or an entire folder, Upload and Download tasks will be added to the batch list so you can execute them in batch.
If you enable the option "Append date" in preferences, the recording date will be appended to the name of .rec files when you open, convert, or download them.
The Altair menu has an option called "Turbo", enabled by default, which gives higher data transfer rate. When Turbo is enabled and a data transfer (download, upload, high-speed playback) is in progress, the Topfield does not respond to the remote control: in this case, if you want to use your remote, you have to disable Turbo. But please note that, unlike what happens in Altair.exe or MacTF, with Altair Files you can enable and disable Turbo at any time, even in the middle of a data transfer. The change takes effect in a few seconds. Also note that you don't have to disable Turbo when there is no data transfer: Altair Files does it for you.
With the "Delete" button you can delete a file from the Topfield. You will be asked 3 times for confirmation. One of these three messages will contain a mini-player that will let you see the .ts file for the last time, and realize what you are going to delete. You can disable the player by holding down the Option key while you click the Delete button; this can be useful if, for some reason, MPEG Streamclip hangs before the player appears. Still with the Option key, you can select and delete many files at once.
Using the Delete button, you also can delete an entire folder (or many folders) and all the files and folders contained in it. But you have to hold down the Option key while you click Delete, and again, you will be asked three times for a confirmation. Please note that some folders, like \DataFiles, cannot be deleted.
With the "Rename" button you can change the name of files and folders. But you can't change the file extension.
With the "Folder" button you can create a new subfolder in the current folder. A default name will be proposed to you: to change it, you can click "Rename" in the window that will appear.

Altair Files does not make use of any portion of code from MacTF or Altair.exe. In fact, the I/O system included in Altair Files (and developed by Squared 5) is much more powerful than those found in MacTF or Altair.exe, and it can handle up to 3 different streams from/to the Topfield at the same time (download + upload + playback). And the user interface is more comfortable and responsive. Also, Altair Files is more reliable than MacTF.
Please note that MacTF cannot be used while Altair Files is running.

OTHER COMPATIBLE DEVICES
MPEG Streamclip is compatible with FireWire, Ethernet, USB and DVD devices like Elgato EyeTV digital video recorders, ReplayTV digital video recorders, the Humax

PVR-8000 set-top box, the Homecast set-top boxes, the Technisat S1 set-top box, the Panasonic SV-AV100 camcorder, the JVC Everio camcorder, the Sony T1 camera, the Panasonic VDR-M70 and the Hitachi DZ-MV230 camcorders; and with many other devices.

MPEG Streamclip is also compatible with MPEG-2 devices supported by DVHSCap and VirtualDVHS (free applications available from Apple as part of the FireWire SDK for developers); namely, the Sony IP7/MicroMV, the Sony HDR-FX1, the JVC GR-HD1 camcorders; the JVC HM-DH30000U and the Mitsubishi HD-2000U video cassette recorders; the Samsung SIR-T165 set-top box, and many more cameras or recorders. If you have one of these devices, please connect it to the FireWire, use DVHSCap or VirtualDVHS (whichever works better) to capture the M2T file, then use MPEG Streamclip to convert the M2T file into a more useful format.

Of course, a complete list of compatible devices is not possible since MPEG Streamclip can work with a wide range of MPEG devices and recorders. However, all known compatible devices have been listed here.

If you have a DVD and you want to play or convert its content, please open one or more VOB files from the VIDEO_TS folder.

This application does not read encrypted VOB files. Implementing DeCSS takes about 10 minutes and just a few lines of code, but this would lead to improper use of this software. Squared 5 decided not to include DeCSS. This application is intended for legal use only.

INTERNATIONALIZING MPEG STREAMCLIP

MPEG Streamclip can be localized.

Currently available translations are English, French, German, Brazilian Portuguese, and Italian. English and Italian translations have been provided by Squared 5 (me).

The French translation has been provided by adesir. This translation is complete. You can contact adesir through his french video forum: http://forum.mac-video.fr/ where you can also find useful discussions (in French!) for MPEG Streamclip and related video applications.

The German translation has been provided by Robert Zimmer. This translation is partial (70%), but the most important parts have been completely translated. You can contact Robert Zimmer using his e-mail address: rojozi@arcor.de .

The Brazilian Portuguese translation has been provided by Rosen. This translation is complete. You can contact Rosen using her e-mail address: rcholbi@mac.com .

The Spanish translation has been provided by Pedro Alvera. This translation is partial (65%), but the most important parts have been completely translated. You can contact Pedro Alvera through his web site: http://www.pedroalvera.com/

Many thanks to these three translators (they localized MPEG Streamclip for free). Please note that the translators do not have access to preview or beta versions, and also note that I have slightly edited their translation just before releasing this version.

You can add a localization for your language. Control-click the application in Finder and select "Show Package Contents" (well, if you have a localized Finder, the sentence "Show Package Contents" appears in your language...). Open the "Contents" folder and then the "Resources" folder. Duplicate the "English.lproj" folder and rename it to your language's name in English (for instance, "Spanish.lproj", "German.lproj", "French.lproj" etc...) then open the renamed folder; rename the file "Localizable(disabled).strings" to "Localizable.strings", open it in a text editor which supports Unicode (TextEdit is OK) and localize it by translating the right-hand strings. Then you can translate the other text files included in the same folder, if you want (of course, translating this user guide may be very hard!). When you are done, you can run MPEG Streamclip to test your localization. If needed, you can enable or disable a localization in the Info window that the Finder shows for the application.

MPEG Streamclip loads the strings for the user interface from the Localizable.strings file. DO NOT localize or modify the .nib file: if one of the translated strings does not fit a field in the user interface, either shorten it or ask Squared 5 to enlarge the field.
If you succeed in translating at least half of the Localizable.strings file (even from an earlier version of MPEG Streamclip), then you can submit your localization to Squared 5 (squared5@mpeg-streamclip.com).

By submitting a localization, you implicitly grant Squared 5 the rights to include your localized files, in whole or in part, and for free, in the next versions of this software, and the rights to report your name and (if possible) your e-mail address here and in Preferences; and also the rights to arbitrarily modify your files, mix them with the contents of other files, or discard them and choose another localization, at any time.

SUPPORT

There is no support for this free application, however you can write and ask your questions to Squared 5 (squared5@mpeg-streamclip.com). I will answer only if I have time.
Even if you have no questions to ask, please give your feedback because this will be helpful for me in order to improve this application.
Please, don't forget to mention your operating system (Mac OS X) and your processor (PowerPC or Intel).

BUGS?

Please report any bug you find in this application to Squared 5 (squared5@mpeg-

streamclip.com). Even if you get no answer, the bug will be investigated and possibly fixed in the next version.